FWA7304 Series
Network Appliance

User's Manual

Version: 1.0

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Foreword

To prevent damage to the system board, please handle it with care and follow the measures below, which are generally sufficient to protect your equipment from static electricity discharge:

When handling the board, use a grounded wrist strap designed for static discharge elimination grounded to a metal object before removing the board from the antistatic bag. Handle the board by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.

When handling processor chips or memory modules, avoid touching their pins or gold edge fingers. Return the Network Appliance system board and peripherals back into the antistatic bag when not in use or not installed in the chassis.

Some circuitry on the system board can continue to operate even though the power is switched off. Under no circumstances should the Lithium battery cell used to power the real-time clock be allowed to be shorted. The battery cell may heat up under these conditions and present a burn hazard.

WARNING!

1. "CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.

   REPLACE ONLY WITH SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS"
2. This guide is for technically qualified personnel who have experience installing and configuring system boards. Disconnect the system board power supply from its power source before you connect/disconnect cables or install/remove any system board components. Failure to do this can result in personnel injury or equipment damage.
3. Avoid short-circuiting the lithium battery; this can cause it to superheat and cause burns if touched.
4. Do not operate the processor without a thermal solution. Damage to the processor can occur in seconds.
5. Do not block air vents at least minimum 1/2-inch clearance required.

Chapter 1 Introduction

The FWA7304 series was specifically designed for the network security & management market.

Network Security Applications:
- **Firewall**
- **Virtual Private Network**
- **Proxy Server**
- **Caching Server**

Network Management Applications:
- **Load balancing**
- **Quality of Service**
- **Remote Access Service**

The FWA network appliance product line covers the spectrum from offering platforms designed for :

- **SOHO**
- **SMB**
- **Enterprise**

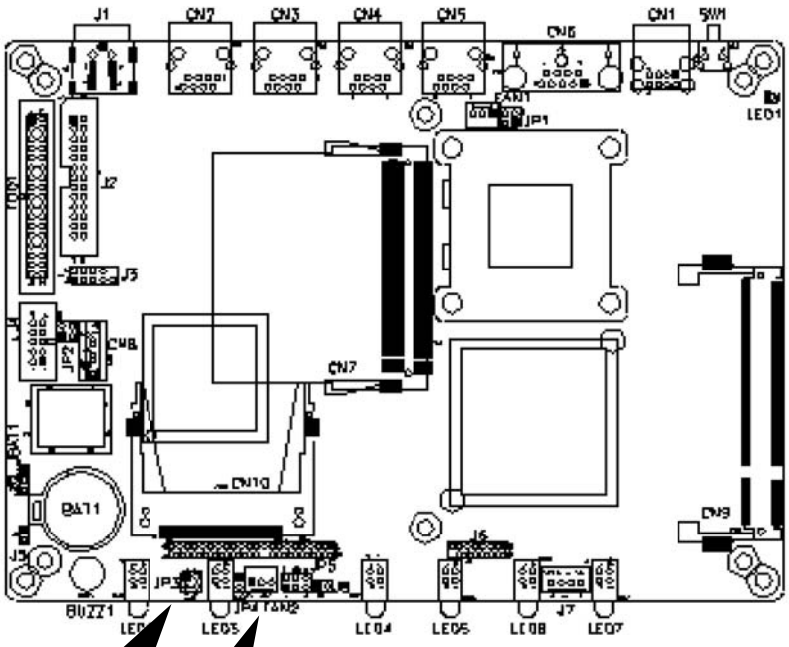
Each product is designed to address the distinctive requirements of its respective market segment from cost effective entry-level solutions to high throughput and performance-bound systems for the Enterprise level.

Chapter 2 System Specification

Processor	VIA Eden V4 CPU, 1GHz L2 Cache: 128K
Memory	DDR2 So-DIMM x 1
Chipset	VIA CN700 North Bridge
Expansion slots	32bit/33MHz Mini-PCI slot x 1
Ethernet	Realtek RTL8100C Fast Ethernet controllers x 4 , 10/100 Base-T
Front I/O	USB 2.0 ports x 2 Power LED x 1 Status LED (GPO) x 2 , Alarm LED (GPO) x 2 ,
Hardware Monitor	Voltage, Temperature, fan
Power Supply	20W power adaptor. 100-240V, 50-60Hz
Dimensions	225mm (D) x 156mm (W) x 35mm (H)

CPU board layout

Back Side



Front Side

Jumper Setting

JP3

JP4

JBAT1: Clear CMOS Contents

Use JBAT1, a 3-pin header, to clear the CMOS contents

JBAT1	Setting	Function
1 2 3	Pin 1-2 Short/Closed	Normal
1 2 3	Pin 2-3 Short/Closed	Clear CMOS

JP3: HDD UDMA Selection

JP3	Setting	Function
2 4 1 3	Pin 1-2 Short	BIOS Detect
2 4 1 3	Pin 1-3 Short	Upper UDMA33
2 4 1 3	Pin 2-4 Short	UDMA33 Only (Default)

JP4: CF Card Master / Slave Selection

JP4	Setting	Function
	Pin 1-2 Short	Master
	Pin 1-2 Open	Slave

Chapter 4 Console Mode Information

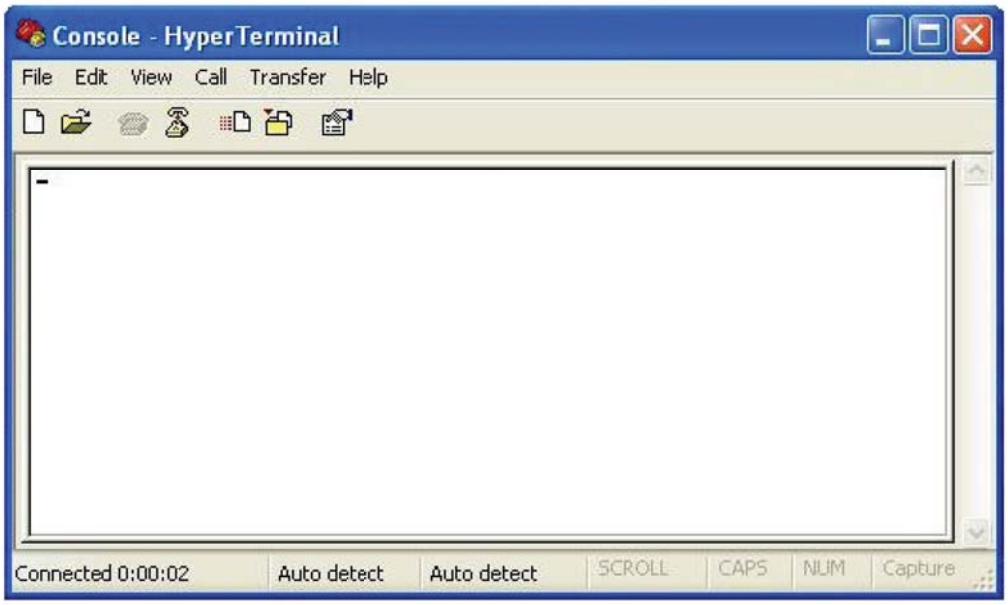
FWA7304 supports output information via Console in BIOS level.

Prepare a computer as client loaded with an existing OS such Windows XP.
Connect client computer and FWA7304 with NULL Modem cable.
Follow the steps below to configure the Windows Hyper Terminal application setting:

1. For executing the Hyper Terminal, issue command “hypertrm”.
2. Customize your name for the new connection.

3. Choose the COM port on the client computer for the connection.

4. Please make the port settings to Baud rate 19200, Parity None, Data bits 8, Stop bits 1



5. Power up the FWA7304, and the screen will display the following information.

```
   Phoenix - AwardBIOS v6.00PG, An Energy Star Ally
   Copyright (C) 1984-2003, Phoenix Technologies, LTD


Main Processor : CPU 1.40GHz
Memory Testing : 2088960K OK +  8M shared memory
CPU Brand Name : CPU 1.40GHz


  Memory Frequency For DDR2 533 (Dual Channel Mode Enabled)
IDE Channel 0 Master : None
IDE Channel 0 Slave  : None

IDE Channel 2 Master : ST3160023AS 3.18
IDE Channel 2 Slave  : None
IDE Channel 3 Master : None
IDE Channel 3 Slave  : None


Press DEL/TAB(console) to enter SETUP
```

6. Press <**Tab**> key to enter BIOS setup screen in **Console mode**.
   Press <**Del**> key to enter BIOS setup screen in **VGA mode**.

Chapter 5 Open the chassis

Fig. 5-1 Loosen the four screws of the chassis on the back to remove the top lead.

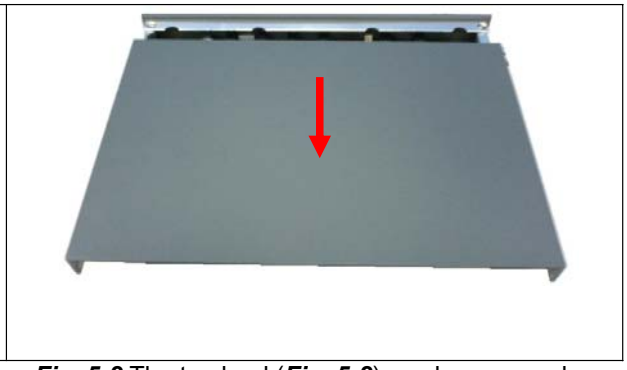


Fig. 5-2 The top lead (***Fig. 5-2***) can be removed from the base stand (***Fig. 5-3***).

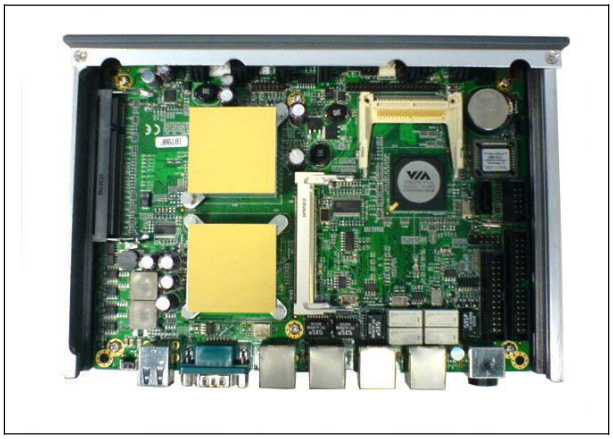


Fig. 5-3 *The base stand*

Chapter 6 Removing and Installing CompactFlash Card

Fig. 6-1 *Compact Flash Card*

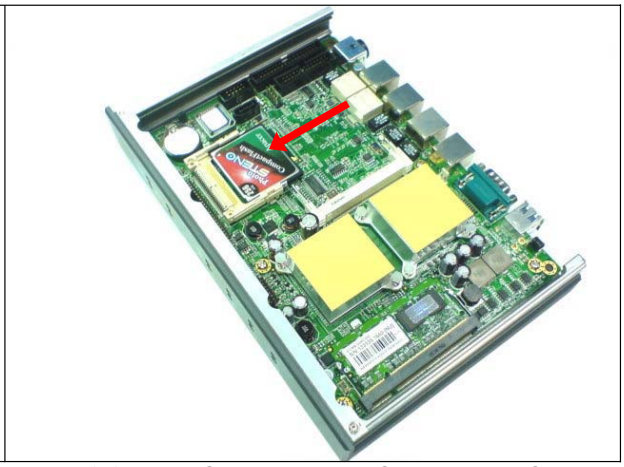


Fig. 6-2 *Insert Compact Flash Card into the CF interface*

Fig. 7-1 Mini-PCI card.

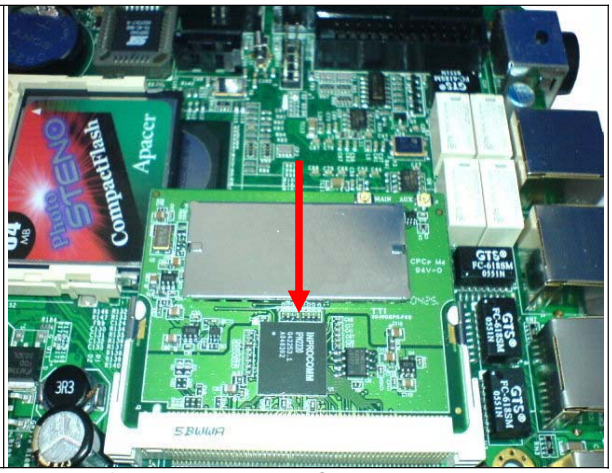


Fig. 7-2 Install the Mini-PCI card.

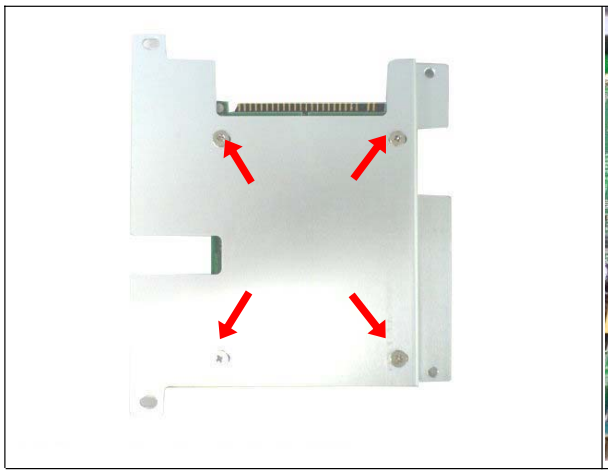


Fig. 8-1 *Fasten the four screws to lock HDD and bracket together.*

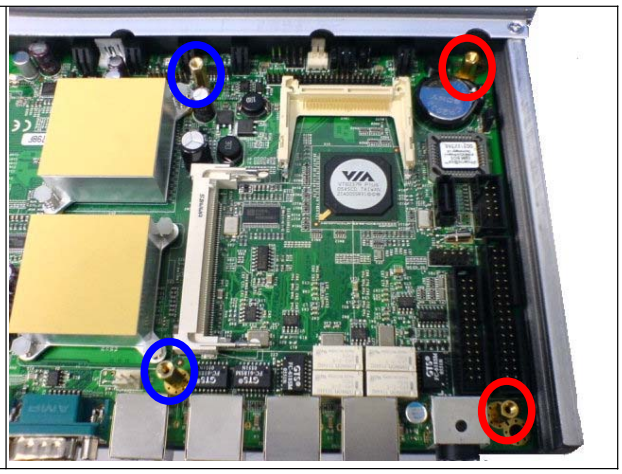


Fig. 8-2 *Fasten the four stands-off to lock IB798.*
Blue *portion for long stands-off.*
Red *portion for short stands-off.*

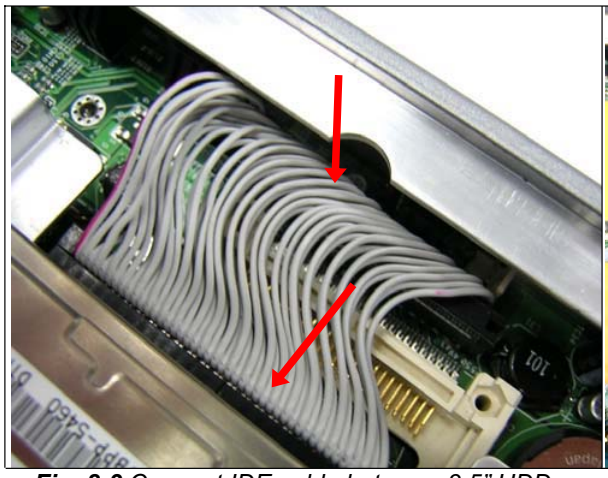


Fig. 8-3 *Connect IDE cable between 3.5” HDD and IB798.*

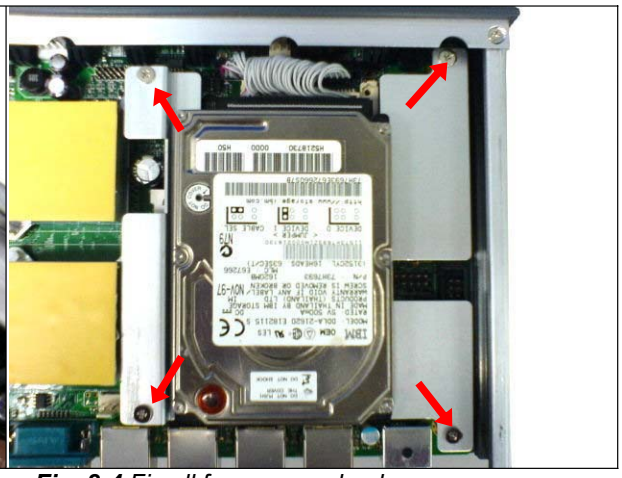
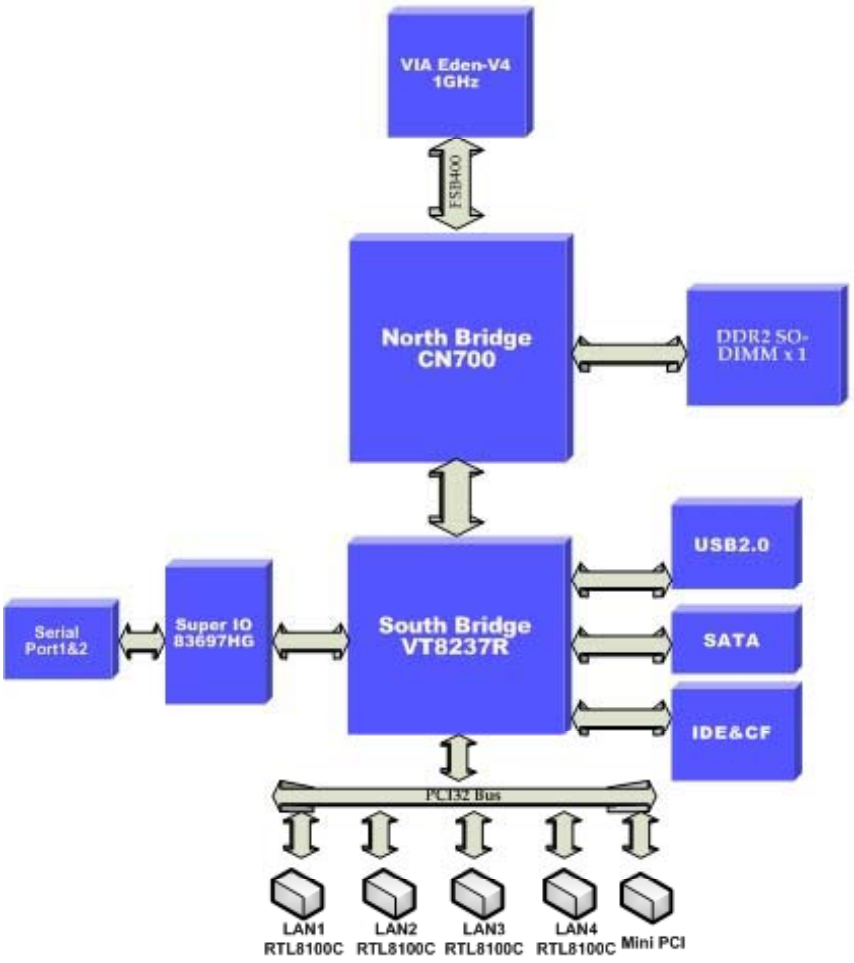


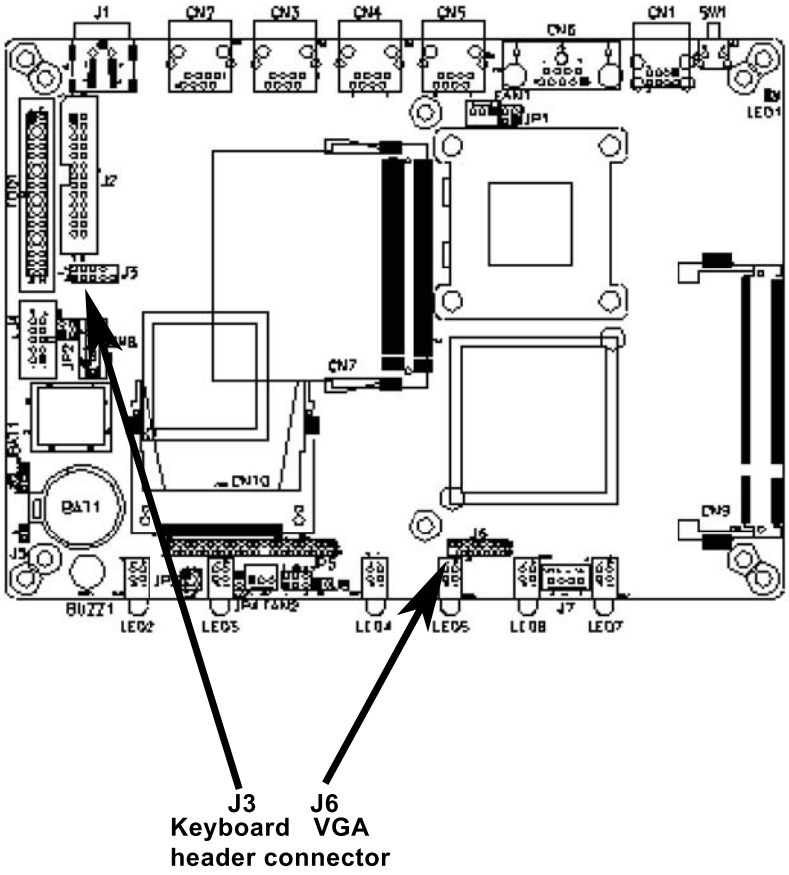
Fig. 8-4 *Fix all four screws back*

Chapter 9 System Architecture

The following block diagram illustrates a basic design reference of IB798, a highly integrated system solution.



Debugging and Developping tools



J3 Keyboards Connector P/N IBT CAB-PS2G (Header to PS2 MOU KB Female)
J6 Video Output for VGA P/N IBT CAB-VETA8 (Header to VGA-F)